DCI Network
Equipment Rack Specification

General

The DCI Group often installs a network equipment rack near the datacomm cable entrance to a building or trailer complex, as a network point of presence (POP) for that location. This technote will offer some minimum standards to follow when installing a data POP. I realize no two locations are the same, so not every installation can be identical; however, this note should be followed as much as possible. Where divergence is necessary, it should remain in the realm of good structured practices, safety, and common sense.

POP Environment Minimum Standards

The DCI technical coordinator, as well as the TM/CC, should insist on the following minimum environment during a walkthrough with a building manager and/or the customer, before installing a data POP:

1. The POP will not be installed in a radiation area, ODH area, confined space, or other hazardous area.

2. Check to be sure there's going to be enough good overhead lighting, especially for cable termination work.

3. The equipment rack must have it's own, dedicated 20A AC circuit & outlet within a reasonable distance, without using an extension cord or creating a trip hazard.

4. The room ambient temperature must be kept between 50°F and 85°F year round.

5. The equipment location has to be protected from water (including rain) both from above and on the floor.

6. There must be at least 2.5'of clear area for the entire rack height, both directly in front and in back of the equipment rack.

7. The rack will only be used for networking equipment and cables, unless by prior agreement with the DCI Group.

8. Both the inside and top of the rack will not be used by anyone for storage.

It's up to the building manager and/or the customer to arrange for these minimum, environmental standards ahead of the installation. If they can't be met, contact the DCI Group Leader, hopefully well before the installation deadline.

POP Equipment Relay Rack

A standard 24W x 30D x 75H rack with 10-32 tapped rails should be used as the first choice for mounting 19" equipment, panels, and distribution boxes. As much of the rack configuration should be done well ahead of time when possible. The rack should be minimally configured as follows:

1. Both side panels, ventilated top panel (or fan when needed), and rear door;

2. Bottom pedestal, **no casters;**

3. At least one AC power strip mounted vertically, just inside the rear door;

4. 19" blank panels used to fill vacant front openings;

5. Additional 10-32 tapped rails to support equipment as needed;

6. One or more CD Network adhesive signs permanently attached to the rack.

7. Appropriate horizontal and vertical cable management installed.

It's the responsibility of DCI to provide the properly equipped rack, not the customer or building manager. We can use their rack if offered, and it meets these requirements, but we should always be ready to supply our own rack.

Equipment Rack Location

The DCI equipment POP should ideally be located near the Telco POP for the building—in the same room if possible. They both benefit from the same environment standards, are usually using the same duct banks for cabling into the building, and some day might even converge onto the same physical plant.

Alternative Wall Mount Racks

Ideally DCI should use a standard relay rack for the main data POP in every building. However, a good 19" wall mount rack (like the Chatsworth) can serve as an alternative in the following cases:

1. There are six or less fibers or copper UTP cables coming into the building, with no likelihood of increasing that number;

2. The building is very small, like a Portakamp or trailer, has few required data drops, and is not a cabling hub for other buildings, Portakamps or trailers;

3. There is only one small active device like a small hub or switch, with no likelihood of future expansion;

4. The existing Telco closet doesn't have enough room for a relay rack, but we still want to be co-located with Telco;

5. There just isn't enough room in the building for another relay rack. This should be a very rare situation.

All the same environment and location standards for a relay rack POP installation should apply as well for a wall mount rack POP. One or more CD Network adhesive signs should be permanently attached to the rack. These are available from the DCI Group.